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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,259	01/02/2002	Anna Charny	CISCP731	7467
26541	7590	10/25/2007		
Cindy S. Kaplan P.O. BOX 2448 SARATOGA, CA 95070			EXAMINER SERRAO, RANODHI N	
			ART UNIT	PAPER NUMBER
			2141	
			MAIL DATE	DELIVERY MODE
			10/25/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/038,259	<b>Applicant(s)</b> CHARNY ET AL.	
	<b>Examiner</b> Ranodhi Serrao	<b>Art Unit</b> 2141	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-9,11,12,15,16,19-22,24,25 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11,12,15,16,19-22,24,25 and 28-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see remarks, filed 1 October 2007, with respect to the rejection(s) of claim(s) 1, 4-9, 11, 12, 15, 16, 19-22, 24, 25, and 28-31 under 35 U.S.C. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference(s). See below rejections.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites "a node" in line 2 and again in line 3. It is unclear whether subsequent recitations of "said node" refer back to the first or second mention of "a node." Therefore the claim is vague and indefinite.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 12 and 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. It appears that claims 12 and 15 would reasonably be interpreted by one of ordinary skill as a system of "software per se", failing to fall within a statutory category of invention. Applicant's disclosure contains no explicit and deliberate definition for the term "means", and in the context of the disclosure and claims in question, one of ordinary skill would reasonably interpret the "means" as software applications. As such, the system of "means" alone is not a machine, and it is clearly not a process, manufacture nor composition of matter. Thus, the claims are not limited to statutory subject matter and are therefore nonstatutory.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 4, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (2002/0172149) and Jain (2002/0112072).

8. As per claim 1, Kinoshita et al. teaches in a data communication network, a method for protecting a node, said method comprising processes of: identifying a node to be protected (see Kinoshita et al., ¶ 2); providing a backup bandwidth pool on links of said data communication network (see Kinoshita et al., ¶ 73); identifying a link pair traversing said node to be protected, said link pair having a bandwidth to be protected (see Kinoshita et al., ¶ 67); establishing as a backup for said link pair a set of one or more backup paths that do not include said node (see Kinoshita et al., ¶ 73) and wherein

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said one or more backup paths collectively have backup bandwidth greater than or equal to said bandwidth to be protected (see Kinoshita et al., ¶12); deducting, for each link included in said set of paths, from backup bandwidth available for protecting said node, while not deducting from backup bandwidth available for protecting other nodes in said data communication network (see Kinoshita et al., ¶ 116); and repeating said processes of identifying, establishing, and deducting for a plurality of link pairs traversing said node without exceeding available backup bandwidth of links used in establishing said backups (see Kinoshita et al., ¶ 126). But fails to teach wherein said bandwidth to be protected of said link pair comprises a lesser of primary bandwidths of links of said link pair traversing said node to be protected. However, Jain teaches wherein said bandwidth to be protected of said link pair comprises a lesser of primary bandwidths of links of said link pair traversing said node to be protected (see Jain, ¶ 103). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. to wherein said bandwidth to be protected of said link pair comprises a lesser of primary bandwidths of links of said link pair traversing said node to be protected in order to effectively address the problem of faults that affect multiple links or faults that affect network components other than links (see Jain, ¶ 11).

9. As per claim 4, Kinoshita-Jain teach a method wherein said set of one or more paths comprises one or more label switched paths (see Kinoshita et al., ¶ 156).

10. As per claim 5, Kinoshita-Jain teach a method wherein said processes of identifying and establishing occur under control of said node (see Kinoshita et al., ¶ 24).

11. As per claim 7, Kinoshita-Jain teach a method further comprising: signaling said backups to other nodes adjacent to said node in said data communication network (see Kinoshita et al., ¶ 68).

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. and Jain as applied to claim 1 above, and further in view of Kodialam et al. (2002/0067693). Kinoshita et al. and Jain teach the mentioned limitations of claim 1 above but fail to teach a method wherein said processes of identifying and establishing occur under control of a computer independent of said node. However, Kodialam et al. teaches a method wherein said processes of identifying and establishing occur under control of a computer independent of said node (see Kodialam et al., ¶ 73). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. and Jain to a method wherein said processes of identifying and establishing occur under control of a computer independent of said node in order to route data through a network having a plurality of nodes interconnected by a plurality of links represented by a graph (see Kodialam et al., ¶ 15).

13. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al., Shabtay et al. (6,895,441), and Andersson et al. (2002/0004843).

14. As per claim 8, Kinoshita et al. teaches a method for operating a data communication network to provide protection to nodes in said data communication network, said method comprising: maintaining, for each of a plurality of links in said data

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communication network, a primary bandwidth pool and a backup bandwidth pool (see Kinoshita et al., ¶ 73); and establishing backup tunnels to protect a plurality of nodes of said network (see Kinoshita et al., ¶ 156), each of said backup tunnels consuming backup bandwidth from backup bandwidth pools of selected ones of said plurality of links (see Kinoshita et al., ¶ 12); and wherein all backup tunnels protecting any particular node of said network do not consume more bandwidth on any link than provided by the link's backup bandwidth pool (see Kinoshita et al., ¶ 116). And furthermore, Shabtay et al. teaches wherein there is at least one set of backup tunnels that protect disparate nodes and that consume more bandwidth on at least one link than provided by said at least one link's backup bandwidth pool (see Shabtay et al., col. 14, lines 17-44). But fail to teach wherein establishing backup tunnels comprises signaling said backup tunnels with zero bandwidth to adjacent nodes of each protected node. However, Andersson et al. teaches wherein establishing backup tunnels comprises signaling said backup tunnels with zero bandwidth to adjacent nodes of each protected node (see Andersson et al., ¶ 96-98). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kinoshita et al. and Shabtay et al. to wherein establishing backup tunnels comprises signaling said backup tunnels with zero bandwidth to adjacent nodes of each protected node in order to protect various primary paths by switched communications over from a primary path to a recovery path in the event of a network change in order to bypass the network change (see Andersson et al., ¶ 21).

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15. As per claim 9, Kinoshita, Shabtay, and Andersson teach a method wherein at least one of said backup tunnels comprises a label switched path (see Kinoshita et al., ¶ 156).

16. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson et al., Shabtay et al., and Kinoshita et al. as applied to claim 8 above, and further in view of Kodialam et al. Andersson et al., Shabtay et al., and Kinoshita et al. teach the mentioned limitations of claim 8 above but fail to teach a method wherein establishing backup tunnels comprises: performing backup tunnel selection computations at each protected node for that protected node. However, Kodialam et al. teaches a method wherein establishing backup tunnels comprises: performing backup tunnel selection computations at each protected node for that protected node (see Kodialam et al. ¶ 28). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Andersson et al., Shabtay et al., and Kinoshita et al. to a method wherein establishing backup tunnels comprises: performing backup tunnel selection computations at each protected node for that protected node in order to reserve link bandwidth and establish an NTP (see Kodialam et al., ¶ 8).

17. Claims 12, 15-16, 19-22, 24-25, and 28-31 have similar limitations as to claims 1, 4-9, and 11 above; therefore, they are being rejected under the same rationale.

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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ranodhi Serrao whose telephone number is (571)272-7967. The examiner can normally be reached on 8:00-4:30pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571)272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*RNS*

R.N.S.

10/16/2007

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